

**Notice of Allowability**

Application No.

10/810,996

Examiner

Ramnandan Singh

Applicant(s)

HARVEY ET AL.

Art Unit

2614

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Jan. 17, 2007.
2. ☒ The allowed claim(s) is/are 7-11, 15-18 and 21-31.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **DETAILED ACTION**

1. This action is in response to applicant's response filed on Jan. 17, 2007. **Claims 7-11, 15-18, 21-31** are pending in the present application.

### **2. EXAMINER'S AMENDMENT/COMMENT**

Applicant has agreed to the following amendment during his telephonic interview with the Examiner held on March 26, 2007:

Claim 15, line # 4, after "signal"—if the environment noise level is higher than a second threshold—has been inserted.

Claim 15, line # 7, after "signal"—if the environment noise level is less than a first threshold—has been inserted.

The Interview summary is enclosed.

### **REASONS FOR ALLOWANCE**

3. The following is an examiner's statement of reasons for allowance:

This invention relates to a method and apparatus for improving voice quality of a speech signal received by a listener in an environment with noise. Claim 7 identifies the uniquely distinct feature of the method

comprising: delaying the downlink signal if the environment noise level is less than a first threshold; and filtering and adjusting the gain of the downlink signal if the environment noise is higher than a second threshold.

As such, claim 7 requires creating a delayed signal if the noise level is less than a first threshold, and creating a filtered signal if the noise level is higher than a second threshold. While the closest prior art, Hahm [EP 0977355 A2], and Chen et al [US 20050264332 A1] each teach creating a delayed signal, Hahm creating a delayed signal without using a threshold, and Chen et al creating a delayed signal using a first delay circuit and a second delay circuit; neither Hahm nor Chen et al teach or suggest creating a delayed signal if the noise level is less than a first threshold, and creating a filtered signal if the noise level is higher than a second threshold. As such, the prior art, either singularly or in combination, fail to anticipate or render the above underlined limitation obvious. Therefore, claim 7 is indicated allowable. Claims 15 and 21 are essentially similar to claim 7 and are indicated allowable. Claims 8-11, 26-31 being dependent from claim 7, claims 16-18 being dependent from claim 15, and claims 22-25 being dependent from claim 21 are also indicated allowable.

4. The claims have been re-numbered as follows:

CLAIMS NUMBER (ORIGINAL)	CLAIMS NUMBER (FINAL)
7-9	1-3
26-27	4-5
10	6
28-29	7-8
11	9
30-31	10-11
15-18	12-15
21-25	16-20

Claim no. 7 along with figure number 1 will be published in the Official Gazette.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramnandan Singh whose telephone number is (571) 272-7529. The examiner can normally be reached on M-TH (8:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ramnandan Singh  
Examiner  
Art Unit 2614

A handwritten signature in black ink, appearing to read 'RNPW', with a horizontal line underneath.